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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/723,512      | 11/26/2003  | William Keely        | QNT-101-A           | 8949             |

7590 07/27/2005

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EXAMINER

JACKSON, TYRONE D

ART UNIT PAPER NUMBER

2862

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

17

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/723,512 | <b>Applicant(s)</b><br>KEELY, WILLIAM |  |
|                              | <b>Examiner</b><br>Tyrone Jackson    | <b>Art Unit</b><br>2862               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: <u>11/26/03</u> <u>11/8/04</u> <u>TJ</u>                                    | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 6,703,831 in view of Crouzen {6,734,670}.

Regarding claims 1, 11, 21 and 25 Patent No. 6,703,831 discloses an apparatus for inspecting contours formed along a predetermined region of a surface on a workpiece formed of electrically conductive material using eddy current comprising:

a probe having a longitudinal axis, the probe movable along a path of travel with respect to the predetermined region to be inspected on the workpiece;

at least two coils spaced longitudinally from one another and supported by the probe to be electrically excited with a predetermined frequency and amplitude during movement of the probe; and

means for measuring the excitation voltage of each coil as eddy currents are induced in the electrically conductive material of the workpiece by the coils supported on the probe (claims 1, 11, 21 and 25).

Regarding claims 2, 12, 22 and 26, Patent No. 6,703,831 discloses the apparatus described above wherein the first and second coils are disposed coaxial with respect to one another (claims 2, 12, 22 and 26).

Regarding claims 3, 6, 13, 16, 23 and 27, Patent No. 6,703,831 discloses the apparatus described above wherein the measuring means further comprises: a first voltage sensor for measuring the excitation voltage of the first coil; a second voltage sensor for measuring the excitation voltage of the second coil; and a comparator for subtracting the excitation voltage sensed by the second voltage sensor from the excitation voltage sensed by the first voltage sensor (claims 3, 6, 13, 23 and 27).

Regarding claims 4 and 14, Patent No. 6,703,831 discloses the apparatus described above wherein the probe is moveable to the testing position within an aperture (claims 4 and 14).

Regarding claims 5 and 15, Patent No. 6,703,831 discloses the apparatus described above wherein the probe is moveable to the testing position to sheath a shaft of the workpiece (claims 5 and 15).

Regarding claims 7 and 17, Patent No. 6,703,831 discloses the apparatus described above wherein a central control unit, responsive to the measuring means, for determining if the workpiece being tested conforms to predetermined specifications (claims 7 and 17).

Regarding claims 8 and 18, Patent No. 6,703,831 discloses the apparatus described above wherein a linear variable differential transformer for measuring a position of the probe as the probe is being moved along the path of travel to the testing position with respect to the workpiece (claims 8 and 18).

Regarding claims 9 and 19, Patent No. 6,703,831 discloses the apparatus described above wherein a linear potentiometer for measuring a position of the probe as the probe is being moved along the path of travel to the testing position with respect to the workpiece (claims 9 and 19).

Regarding claims 10, 20, 24 and 28, Patent No. 6,703,831 discloses the apparatus described above wherein means for comparing measured eddy current signals from the two coils, where non-zero differences after the coils are positioned at the testing position represent an end position of the predetermined region formed on the workpiece being tested (claims 10, 20, 24 and 28).

Patent No. 6,703,831 does not disclose moving the probe to a static testing position and measuring the excitation voltage while the coils supported on the probe is stationary with respect to the workpiece. However, Crouzen teaches using a probe comprising two coils to induce eddy currents in a conductive object for purposes of profiling the surface (column 2 lines 18-21), in which, a set of inspection positions of the coil arrangement with respect to the object are selected (column 2 lines 40-45). Discreet inspection positions imply that measurements must be taken while the probe is stationary. It would have been obvious to one of ordinary skill in the art to modify Patent No. 6,703,831 so as to include the measurement method of Crouzen of stopping the

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probe at certain points to make a measurement because that would eliminate noise/interference and allow for one to clearly analyze what the voltage readings would be when the coils are arranged in certain locations with respect to the object being profiled.

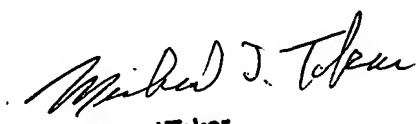
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 4855677 and 5056016 and PGPUBs 20040133117 and 20020039030 all disclose various types of coil systems to measure voltage.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tyrone Jackson

7/21/05



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